

The Bentwood Box

AN ACTIVITY BOOK

for kids from ages 9-14 including adult teaching guide



by
Nan McNutt



Fold

Cut

Design & Illustrations by Yasu Osawa
Northwest Coast Art by Nathan Jackson

SCIENCE KIT CENTER
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SEATTLE, WASHINGTON 98168

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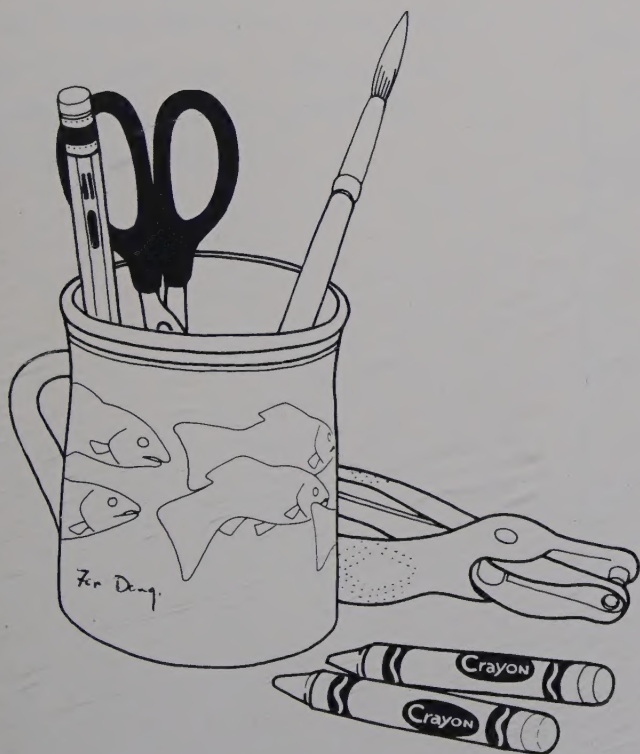
*Design & Illustrations by
Upstream Productions/
Yasu Osawa*

*Northwest Indian Animal Designs
& Cover Art by
Nathan Jackson*

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Box 265
Petersburg, Alaska 99833*



My Special Thanks to:

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Jongie Osawa for making sure this
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*The volunteers, demonstrators and
teachers who have worked in the
Sea-Monster House at the
Pacific Science Center.*

*The Tlingit, Haida, Tsimshian
and Bella Bella people who have
shared their boxes filled with tradition,
esthetics, warmth and a high standard
of quality.*

*E*veryone uses boxes. And the Indians of the Northwest Coast use boxes too — wooden boxes. What would you put into a wooden box? Would you use it for your toys, or clothes, or blankets? Long ago Indians used boxes for these things and other things too. In them they stored food, masks and tools like fishing gear.





*B*oxes were made and used before the Europeans came to the Pacific Coast. They were made from natural materials and are still being made today. A wooden plank is split from a cedar log. It is then cut to make four squares, but the cuts do not go all the way through the wood.

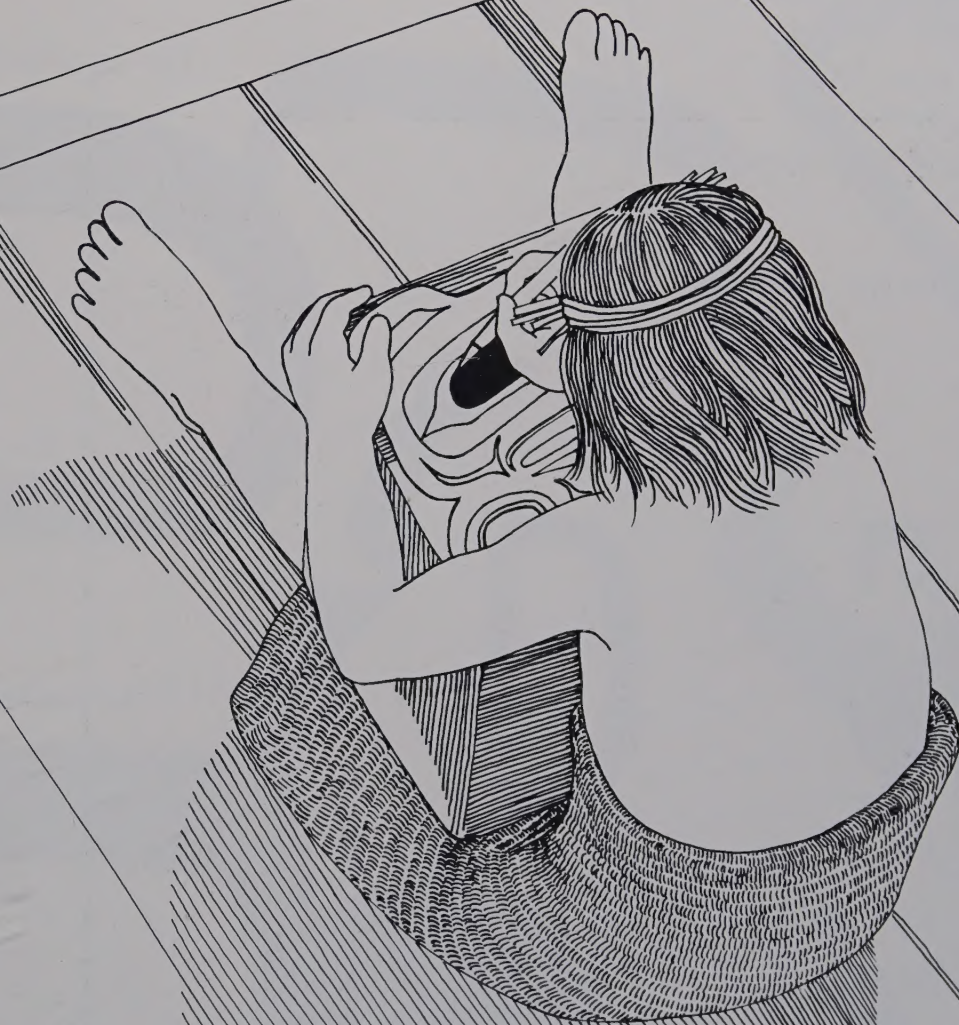
A steaming pit is made on the beach. It is filled with hot rocks from a fire and wet seaweed. The cut plank is put into the pit, covered with more seaweed and finally sand. After the plank has steamed for awhile, it is taken out to be bent. Quickly, it is bent along the three cuts to form the corners of the box.





The side of the bent box is then pegged or sewn with cedar root. The top and bottom pieces are sized and carved, and then the bottom piece is fitted and attached with pegs.

And finally the box is painted. The people of the northern part of the coast, the Tlingit, Haida, Tsimshian, and Bella Bella design their boxes in a special way.

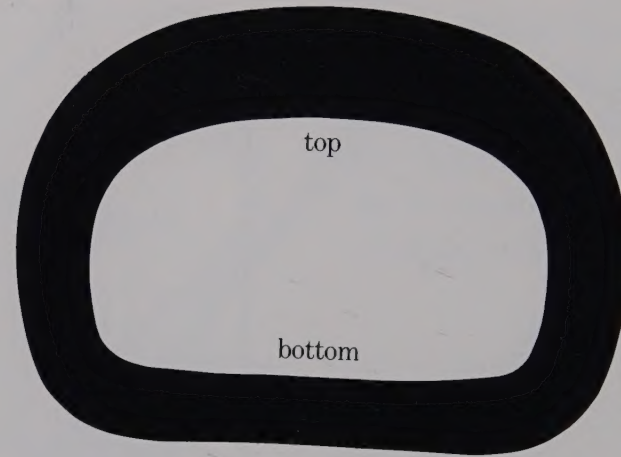


This book will show you how to make those special designs. These designs are over 1000 years old. No one knows who first created them, or why these shapes were chosen.

There are two shapes you need to know.



This is called an **Ovoid**



and this is called a "U" form.



Ovoids and "U" forms

YOU NEED:

PENCIL



Ovoids and **"U"** forms are made in many different sizes and styles.

How many can you find?

_____ Ovoids
_____ "U" forms

Answer:

3 Ovoids
5 "U" forms



*M*ake a Puzzle

YOU NEED:

SCISSORS



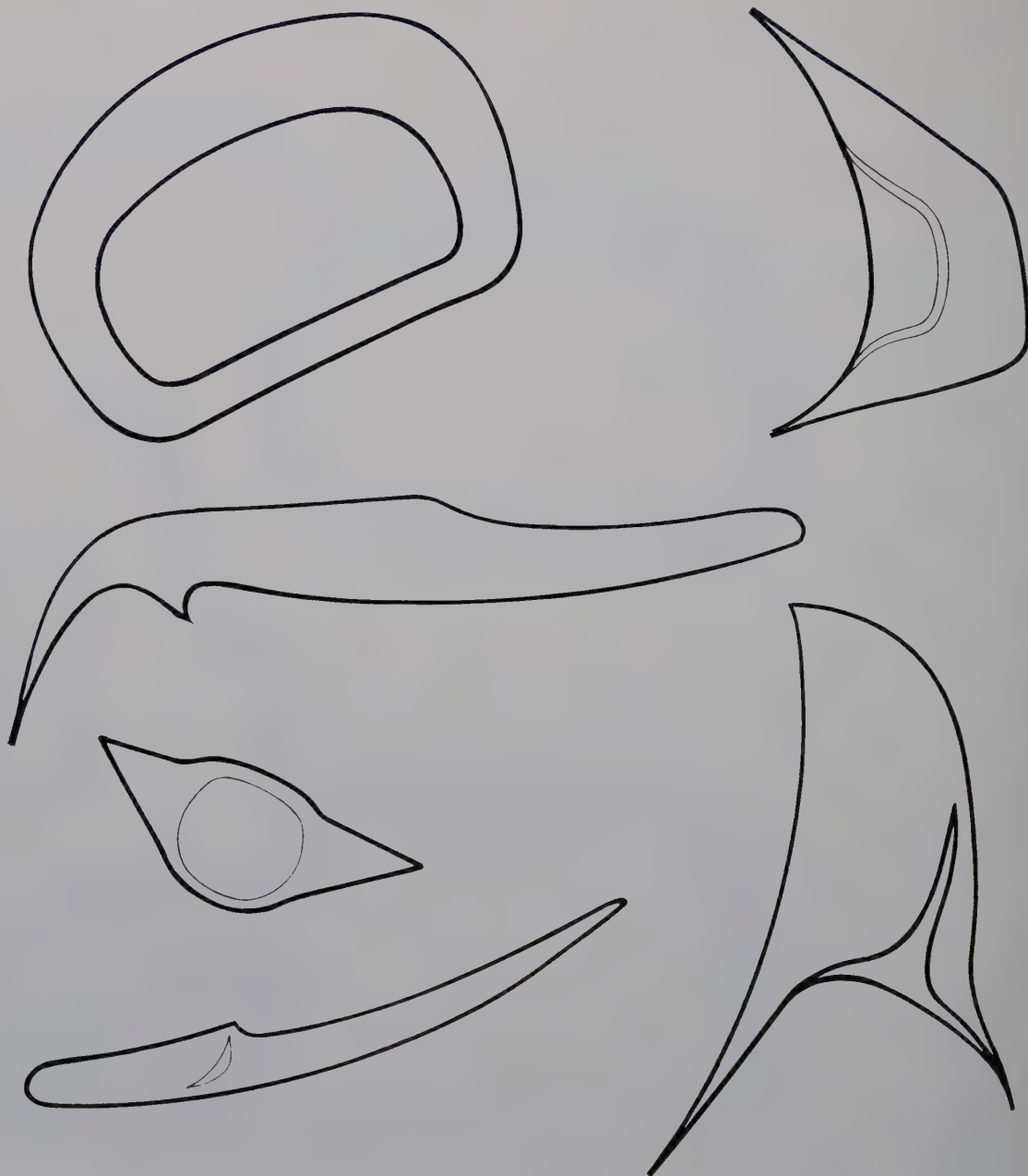
COLOR CRAYON



DIRECTIONS:

1. Color each shape
2. Cut out each shape
3. Now put the puzzle together.
What animal can you make?

This is an Indian design of
Raven's head. Can you make
this design?



*R*aven's Body

YOU NEED:

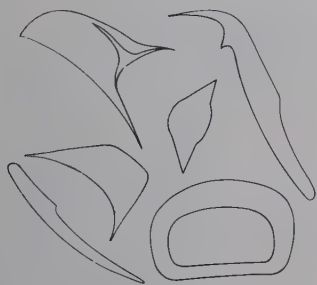
PASTE



COLOR CRAYON

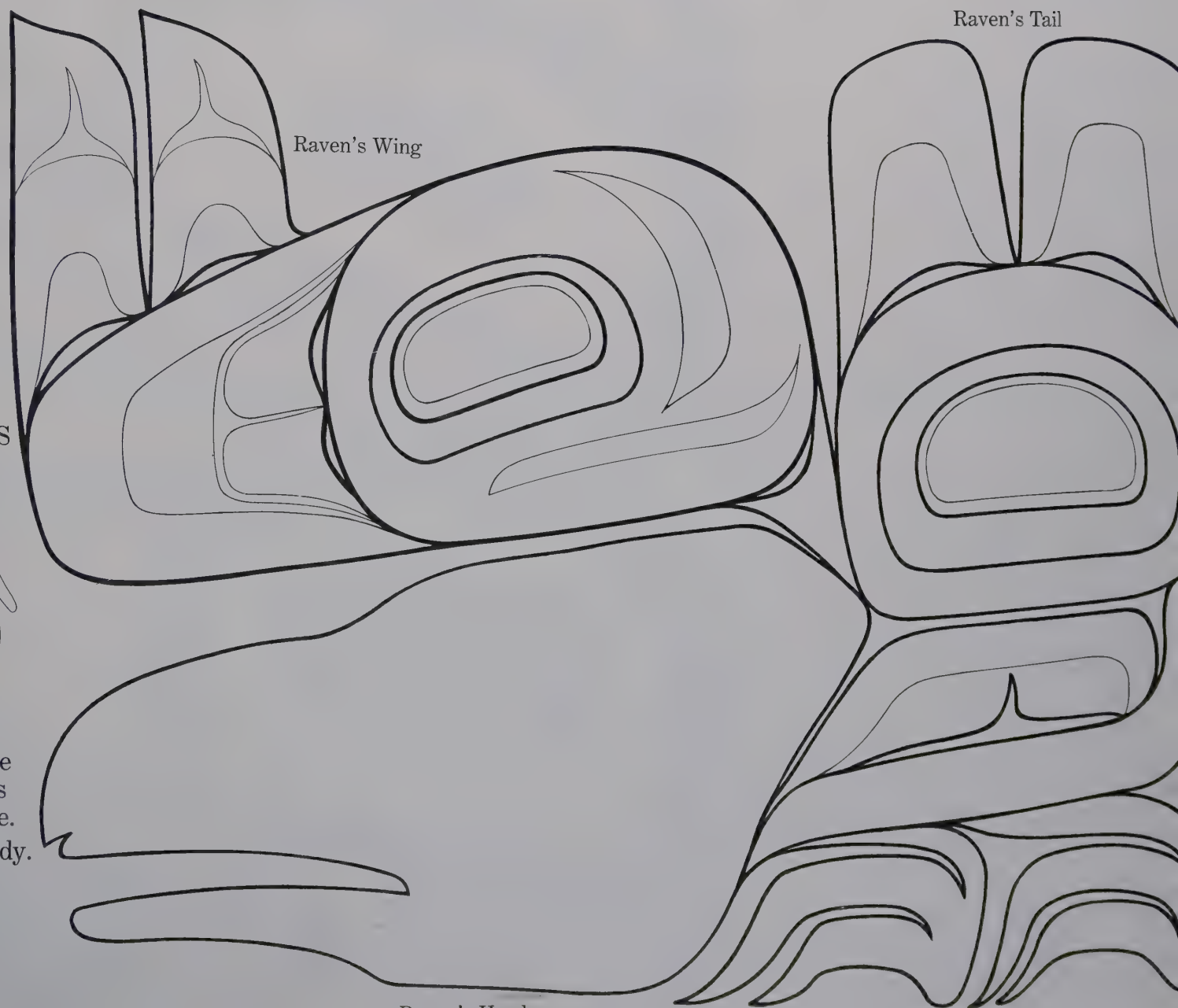


6 PUZZLE PIECES



DIRECTIONS:

1. Paste the 6 puzzle pieces of Raven's head in this space.
2. Color Raven's body.



Raven's Wing

Raven's Tail

Raven's Head.

Raven's Feet

*E*agle Maze

YOU NEED:

YOUR FINGERS



Discover what happens when “U” forms and ovoids are put together.

DIRECTIONS:

1. Place one finger on the white X.
2. Now place one finger of your other hand on any part of the black design.
3. Move your second finger along the black design until you touch the X.
4. Test the maze again but try a different path.
5. Can you find the places that will block your move? How many places are there?

Answer:

There are two places that block your route. They both are called **Inner Ovoids** because they are inside Ovoids. (They're surrounded by white). They look like this > <



Templates: Patterns for Ovoids

YOU NEED:

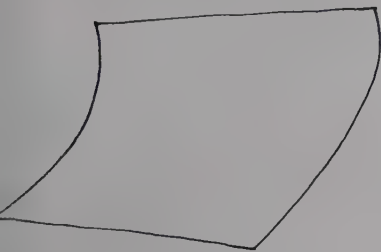
SCISSORS



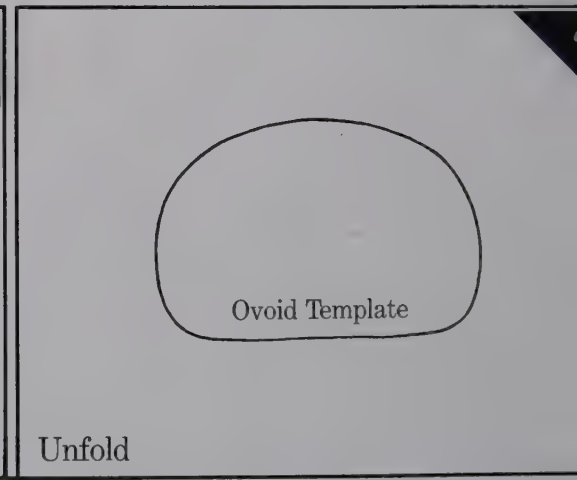
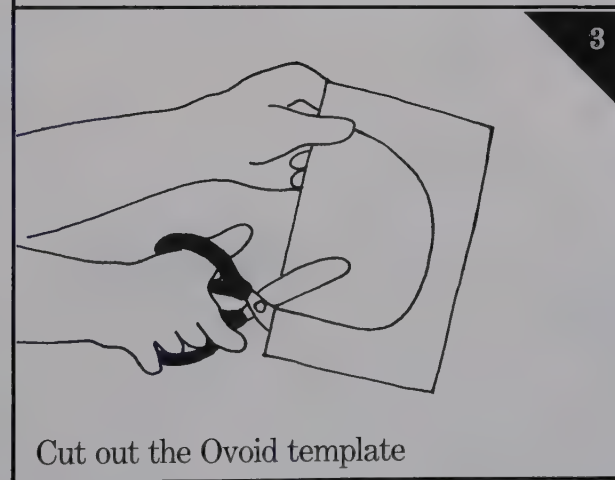
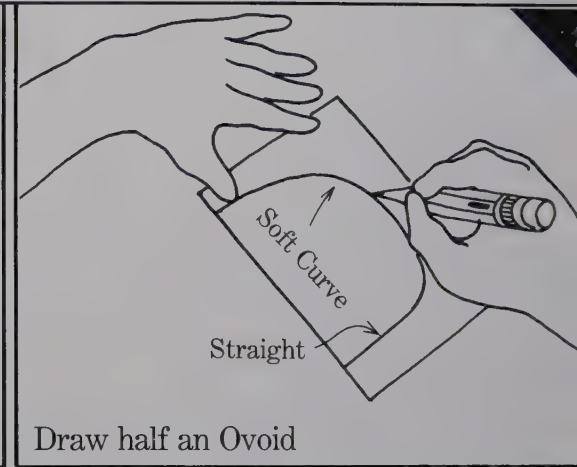
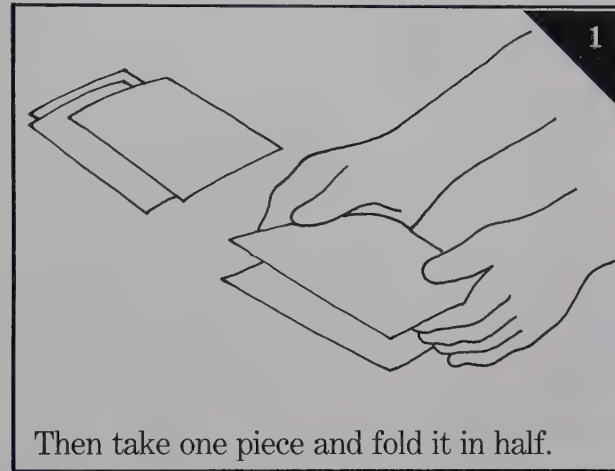
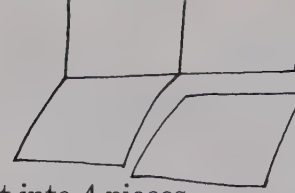
PENCIL



HEAVY PAPER.



Fold your paper and cut into 4 pieces.

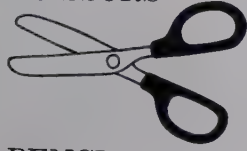


Now you have a pattern to make your own Ovoids. See page 13.

Templates: Patterns for "U" Forms

YOU NEED:

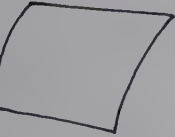
SCISSORS



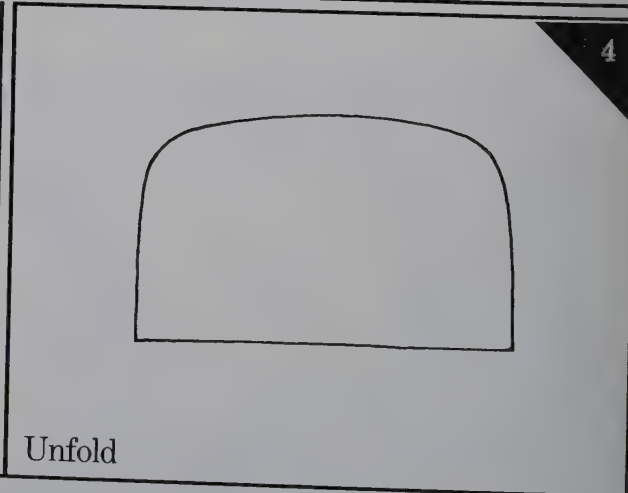
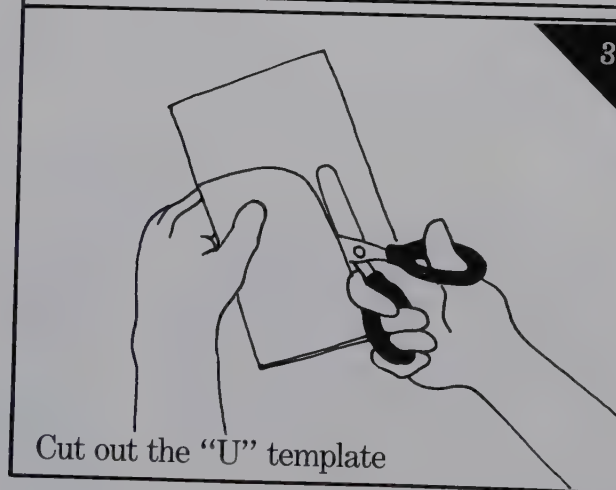
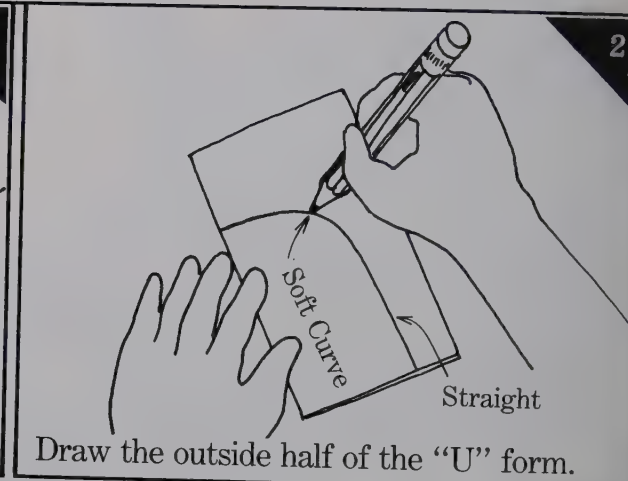
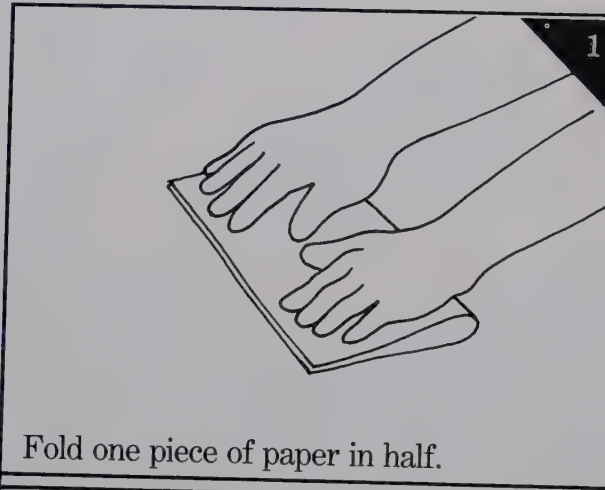
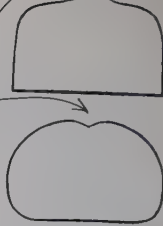
PENCIL



HEAVY PAPER



Be careful of the points
and dips

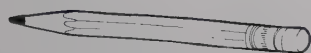


Now you have a pattern to make your own
"U" forms. See page 13.

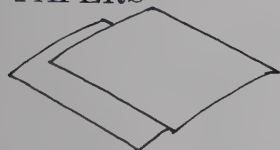
*D*raw your own "U" form and Ovoid

YOU NEED:

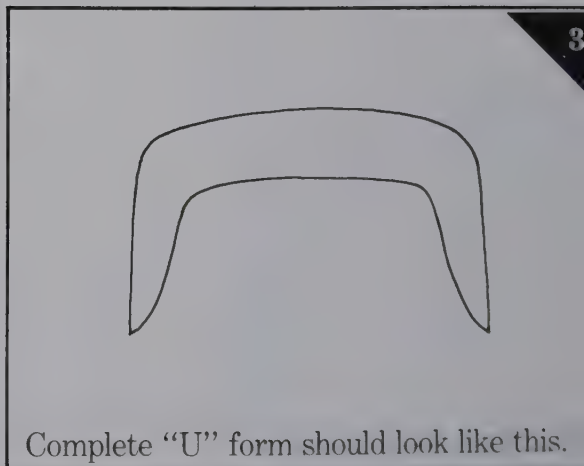
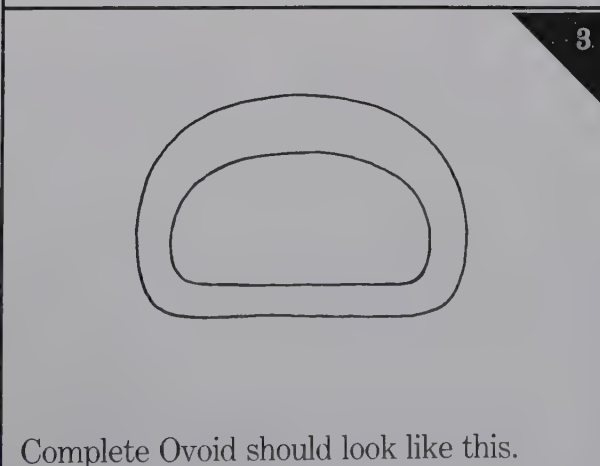
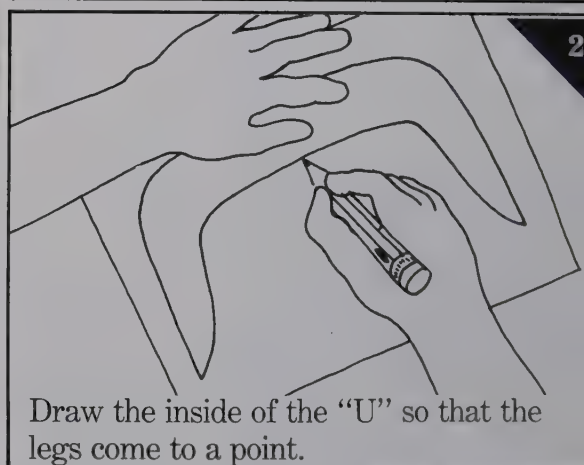
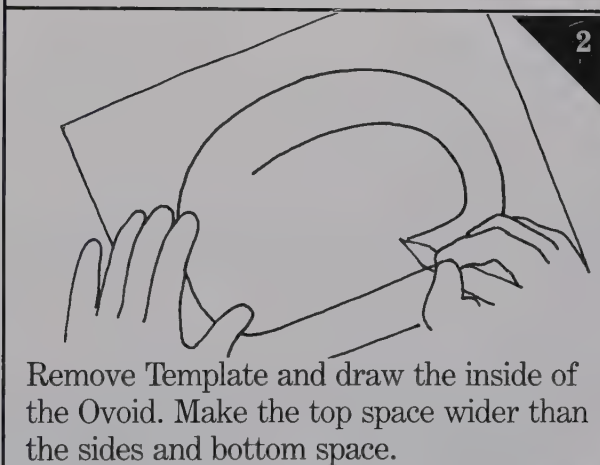
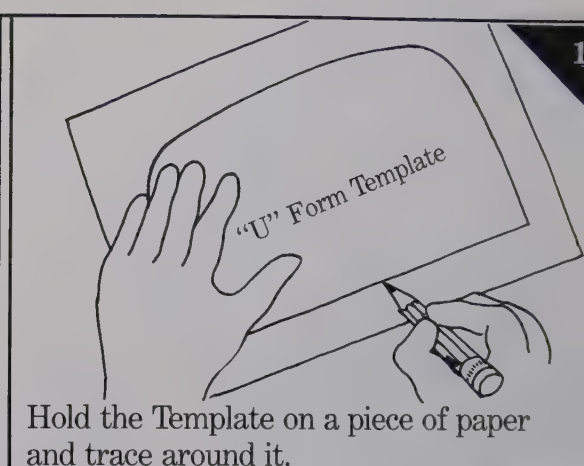
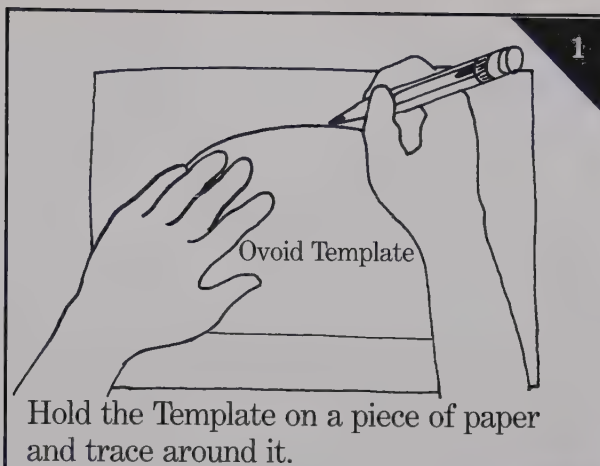
PENCIL



PAPERS



TEMPLATES



Game: Connect It!

"Connect It" introduces you to two new shapes, "T" shape



and Crescent shape.



Look for the white shapes inside the black outlines.

This game will show you all the ways that "U" forms and Ovoids can be connected together.

YOU NEED:

SCISSORS



BOTTLE



A FRIEND - 3 FRIENDS

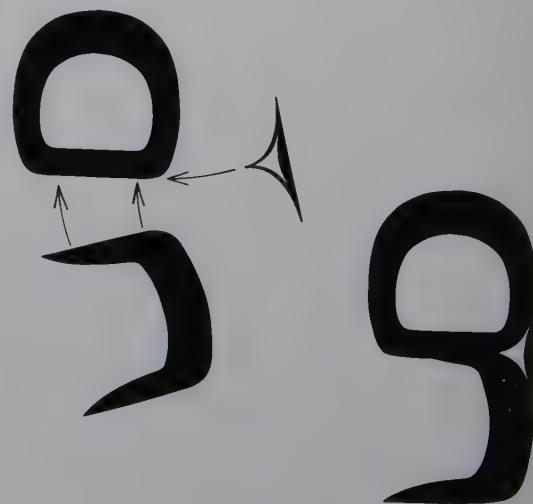


GAME PARTS ON PAGE 15

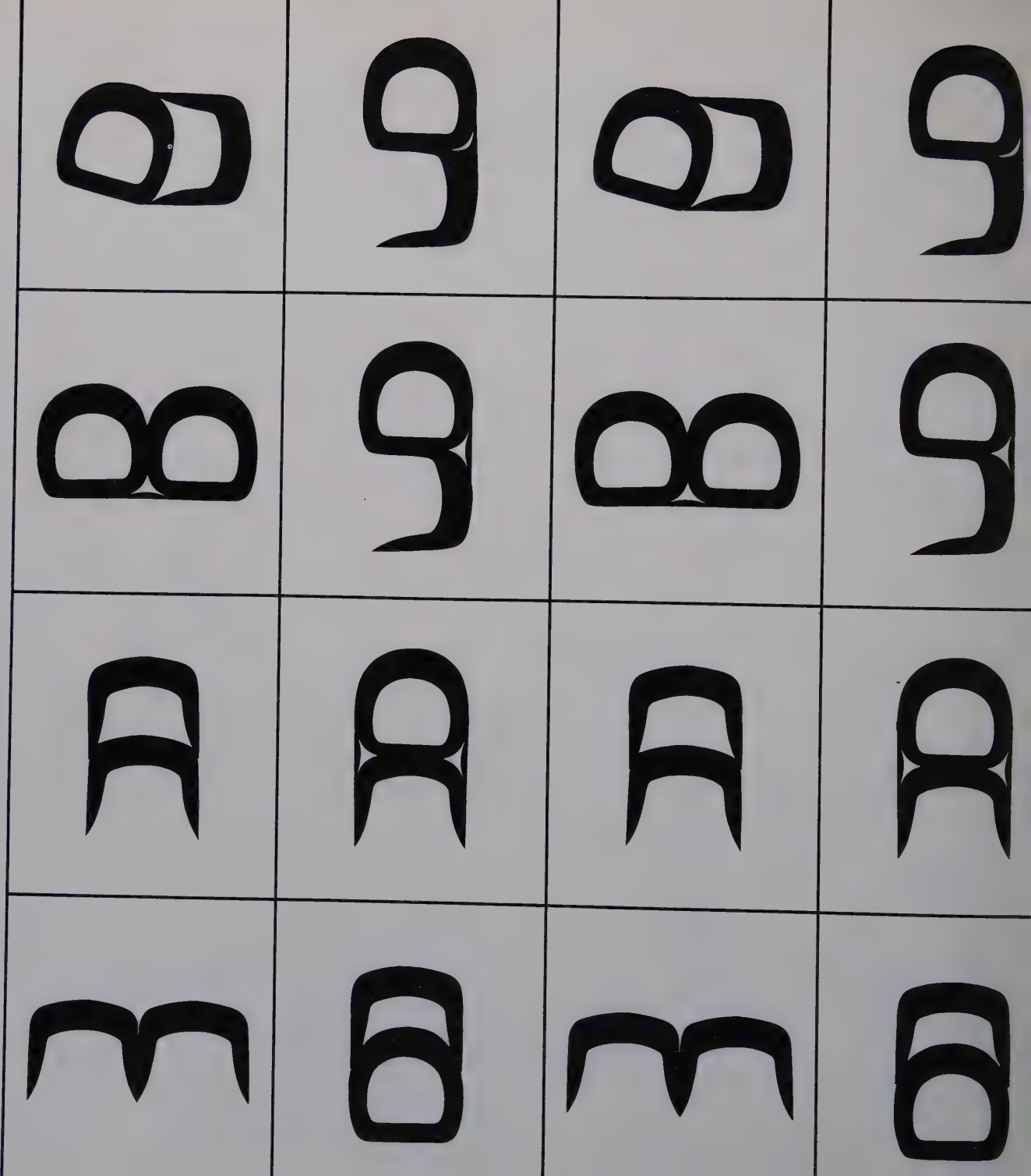
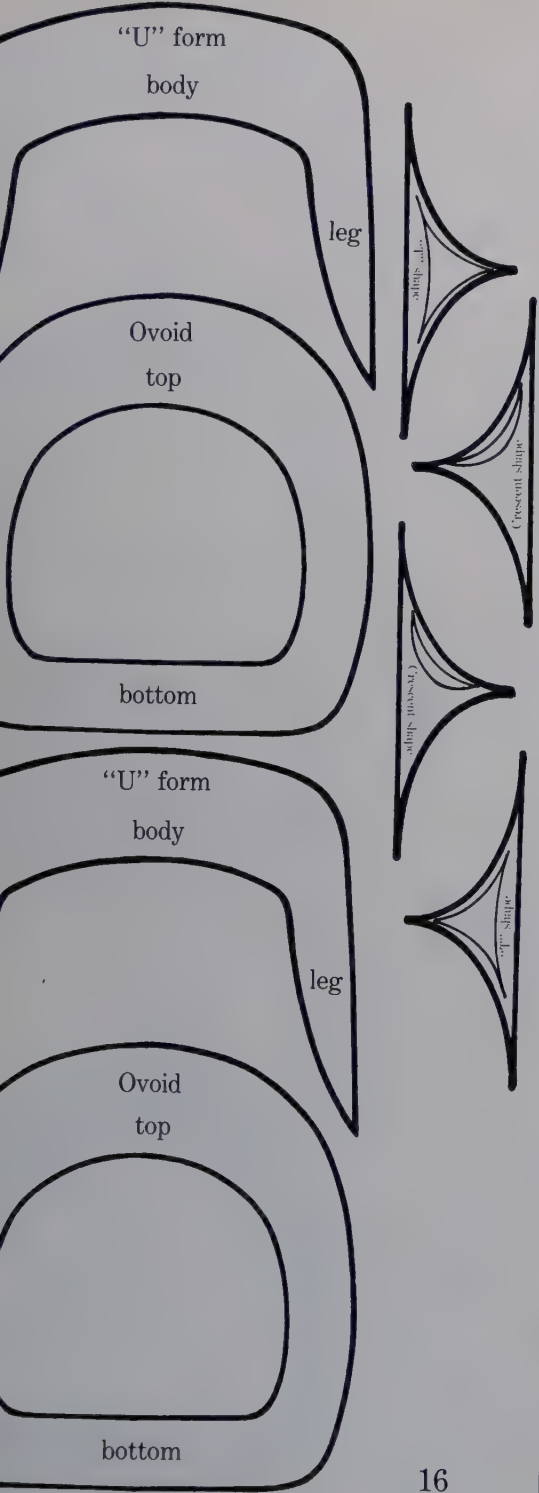
RULES:

1. Cut out all 8 shapes and 16 game cards on page 15.
2. 2 to 4 players sit in a circle.
3. The game cards are placed in a pictures down (writing up) pile.
4. The 8 shapes are placed in another pile.
5. Start the game by spinning the bottle.
6. Whoever the bottle points to draws a game card and **only** reads the directions out loud.
7. The player uses the shapes to make the design written on the game card. Do not look at the back.
8. After the player has made the design, he or she may then look at the back of the card.
9. If the design that the player made is the same as the design drawn on the card, the player gets to keep the card.
10. If the design that the player made is not like the design on the card, the card is placed at the bottom of the card pile (picture down).
11. This player spins the bottle for the next turn.
12. The game is finished when the cards are gone.
13. The player who collects the most cards is the winner.

An example of how the game parts go together.



Overlap the bottom of the Ovoid to the side of the “U”’s leg. Use a Crescent shape.	Connect the points of the “U” form to the side of the Ovoid.	Overlap the bottom of the Ovoid to the side of the “U”’s leg. Use a Crescent shape.	Connect the points of the “U” form to the side of the Ovoid.	
Overlap the bottom of the Ovoid to the side of the “U”’s leg. Use a “T” shape.	Connect the side of an Ovoid to the side of another Ovoid. Use one “T” shape on the bottom.	Overlap the bottom of the Ovoid to the side of the “U”’s leg. Use a “T” shape.	Connect the side of an Ovoid to the side of another Ovoid. Use one “T” shape on the bottom.	
Connect and overlap the bottom of the Ovoid to the body of the “U” form. Use “T” shapes.	Connect the points of one “U” form to the body of another “U” form.	Connect and overlap the bottom of the Ovoid to the body of the “U” form. Use “T” shapes.	Connect the points of one “U” form to the body of another “U” form.	
Connect the points of the “U” form to the top of the Ovoid.	Connect the leg of one “U” form to the leg of another “U” form.	Connect the points of the “U” form to the top of the Ovoid.	Connect the leg of one “U” form to the leg of another “U” form.	



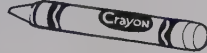
*T*his puzzle is a Whale of a job!

YOU NEED:

SCISSORS

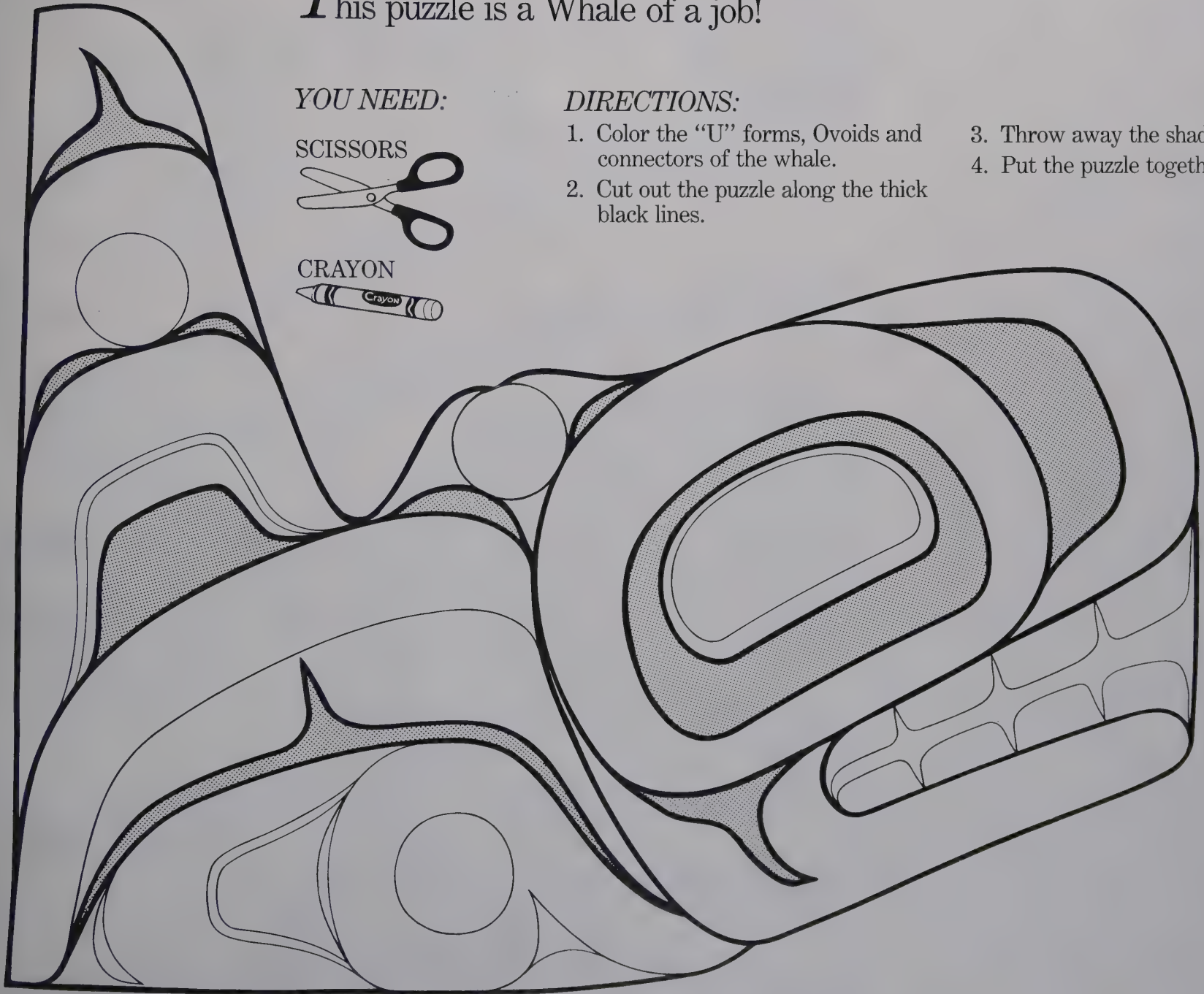


CRAYON

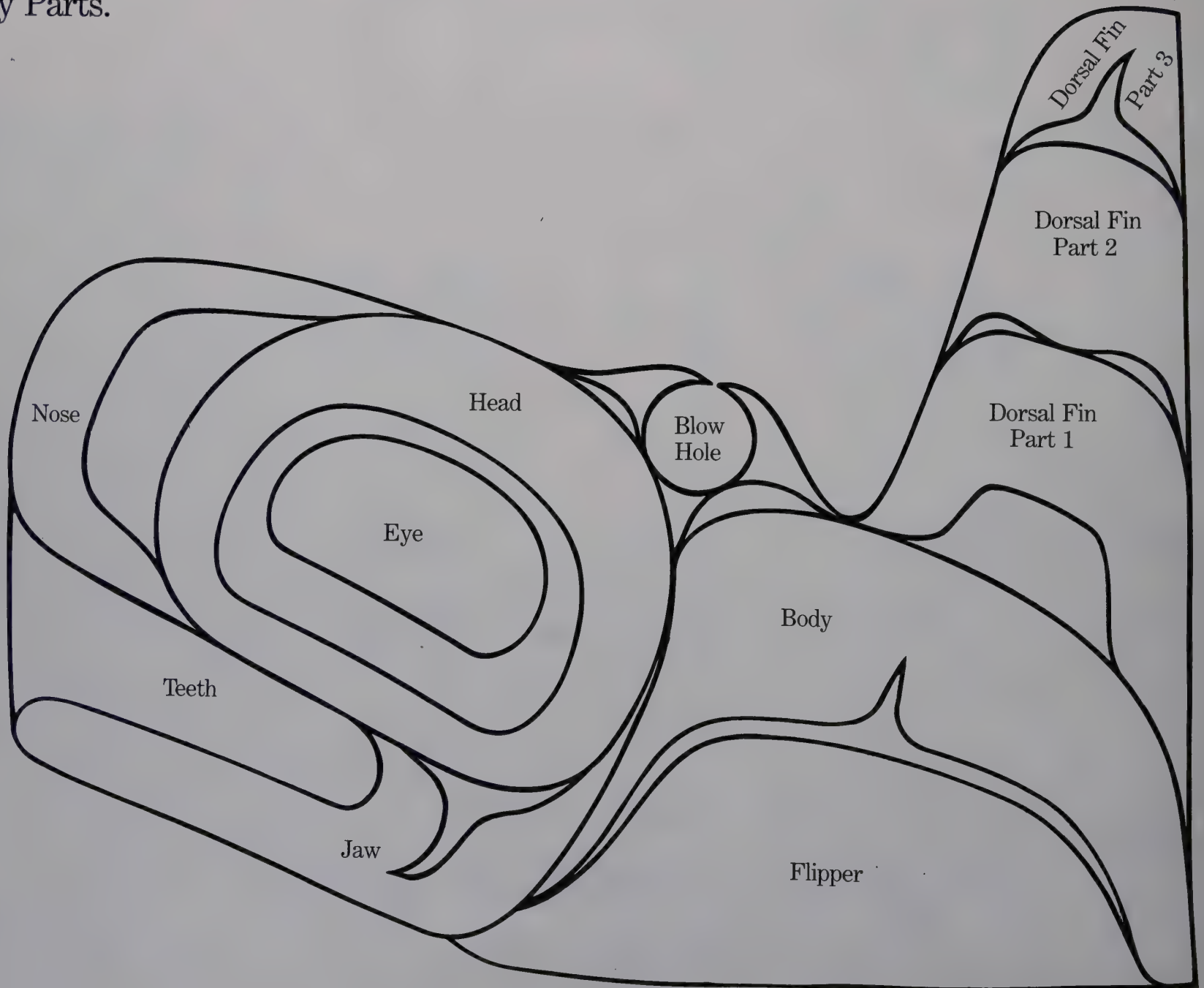


DIRECTIONS:

1. Color the "U" forms, Ovoids and connectors of the whale.
2. Cut out the puzzle along the thick black lines.
3. Throw away the shaded pieces.
4. Put the puzzle together again.



Body Parts.

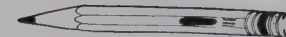




Wolf Maze

YOU NEED:

PENCIL



DIRECTIONS:

1. Put your pencil on the X.
2. Draw a continual line on the Wolf Maze, ending up where you started. (You may go through a place more than once.)

When the "U" forms, Ovoids and Connectors are put together to make an animal, they become a formline design.

FORMLINES ARE:

	Yes	No
BLACK	☐	☐
LINES	☐	☐
WHITE	☐	☐
CURVED	☐	☐
SHORT	☐	☐
CONTINUAL	☐	☐

Answer:

BLACK - Yes
 LINES - No
 WHITE - No
 CURVED - Yes
 SHORT - No
 CONTINUAL - Yes

Salmon Egg Paint

A long time ago Indian people made black paint with charcoal and salmon eggs.

About 1900 they began using paint bought from stores.

You can make salmon egg paint too.

YOU NEED:

SALMON EGGS $\frac{1}{2}$ CUP



1 TABLESPOON OF GROUND CHARCOAL FROM A FIRE.



TWO BOWLS



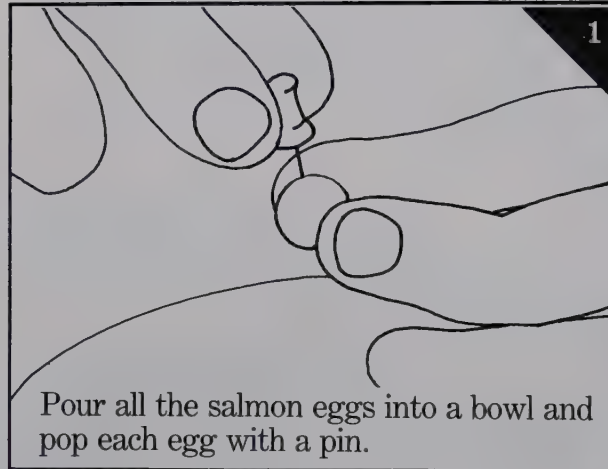
PAINT BRUSH



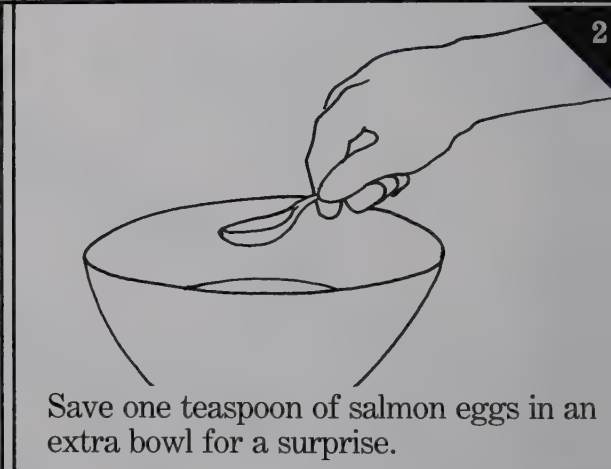
PIN



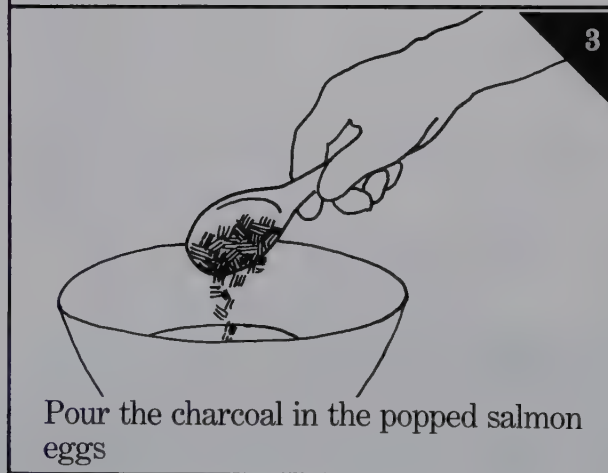
TEASPOON



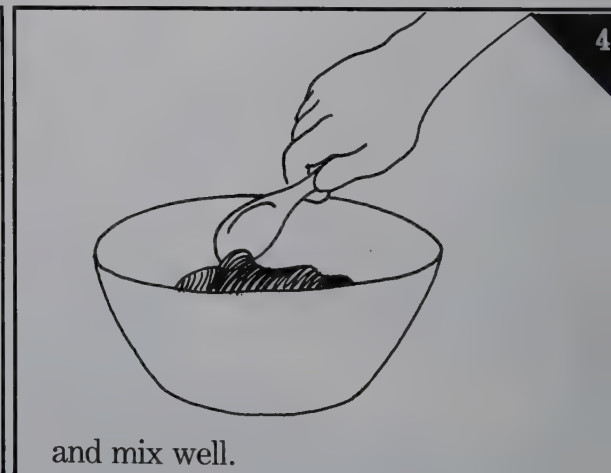
Pour all the salmon eggs into a bowl and pop each egg with a pin.



Save one teaspoon of salmon eggs in an extra bowl for a surprise.



Pour the charcoal in the popped salmon eggs



and mix well.

For a surprise, test your paint.

On a separate sheet of paper try salmon eggs with charcoal.

Now try salmon eggs alone.

What could you use to make red paint?

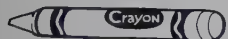
Answer: Red Clay (Barth)

*T*raditional Colors

The two colors used for painting formlines are black and red. The following will help you understand the traditional rules.

YOU NEED:

RED CRAYON



BLACK CRAYON

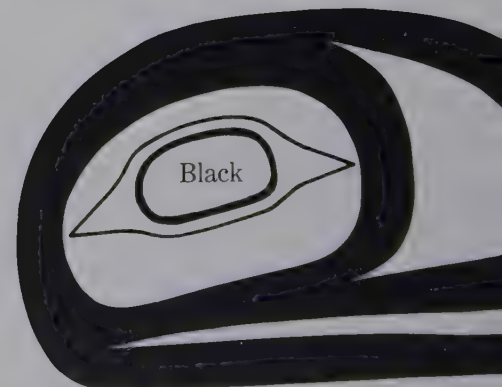
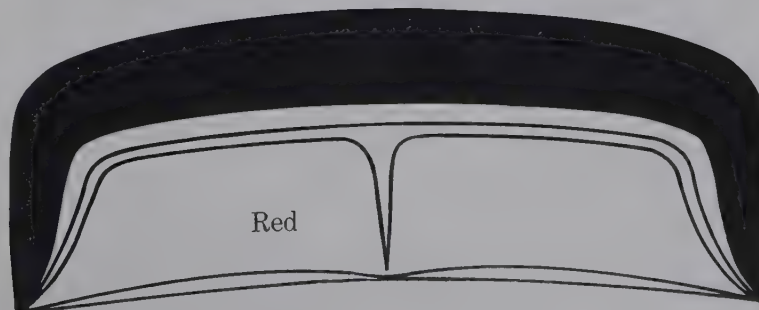
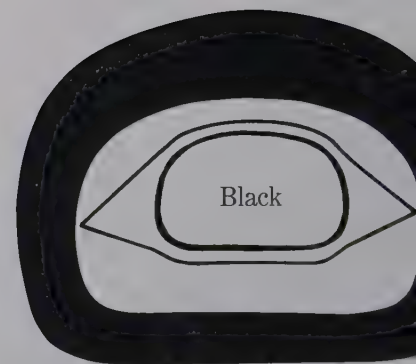
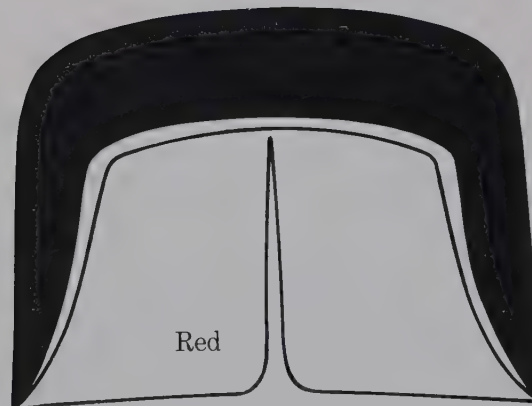


OR SALMON EGG PAINTS



DIRECTIONS:

1. When the formline "U" is black, the inside is red.
2. When the formline Ovoid is black, the inside is black.
3. Now color the insides.



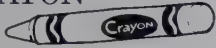
Color the Baby Eagle

YOU NEED:

RED CRAYON



BLACK CRAYON



PENCIL



1. Question: Look at the cover of this book. Sometimes a third color is used in painting Northwest Coast Indian art.
The color is _____.

2. Sometimes this third color appears between two different colors:
_____ and _____.

The third color is always found on _____.
(inside or outside) of the
“U” and **Ovoids**.

Answers:

1. Blue-Green
2. Black and Red
3. Inside



Y

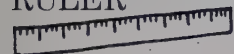
ou can make a model of the
Bentwood Box

YOU NEED:

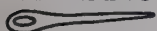
TABLE KNIFE OR BUTTER KNIFE



RULER



PLASTIC YARN NEEDLE



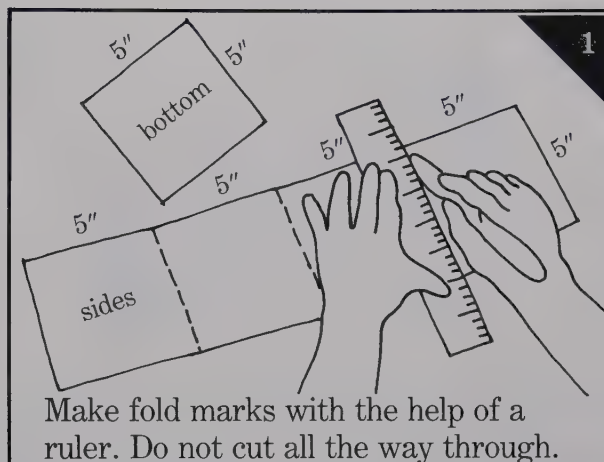
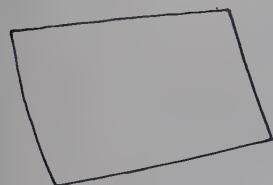
HOLE PUNCHER



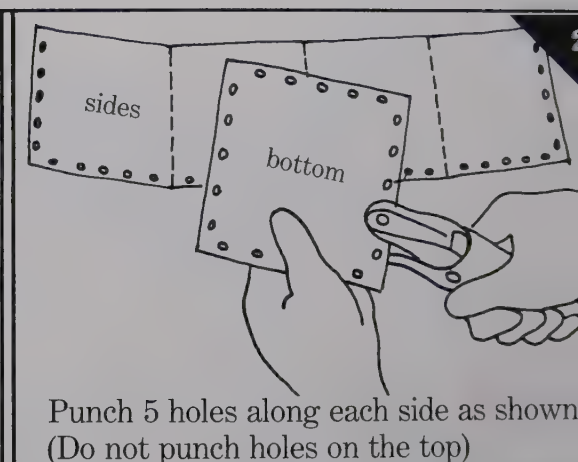
YARN



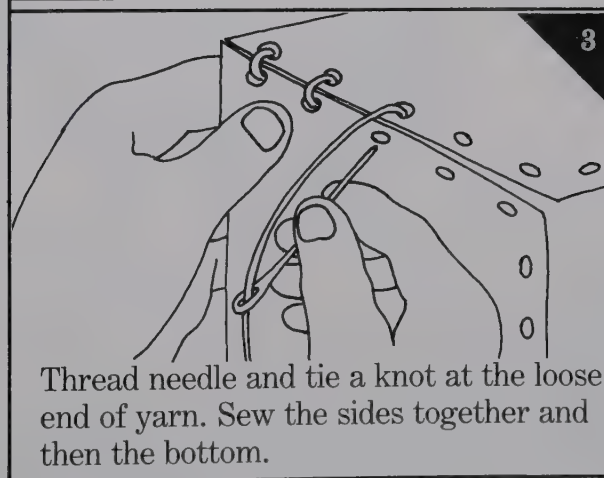
HEAVY PAPER



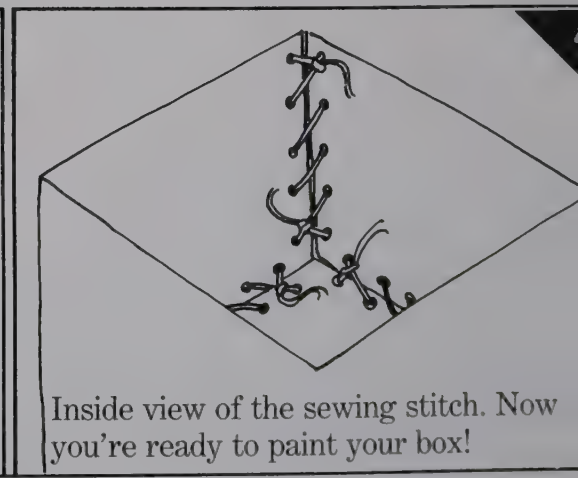
Make fold marks with the help of a ruler. Do not cut all the way through.



Punch 5 holes along each side as shown (Do not punch holes on the top)

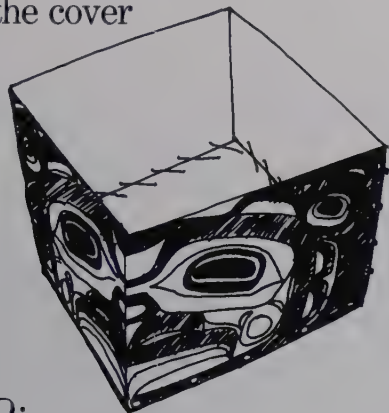


Thread needle and tie a knot at the loose end of yarn. Sew the sides together and then the bottom.



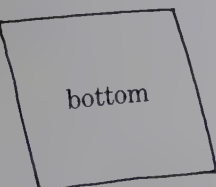
Inside view of the sewing stitch. Now you're ready to paint your box!

To make this model bentwood box using the cover



YOU NEED:

THE COVER OF THIS BOOK
HEAVY PAPER 5½" x 5½"



PLASTIC YARN NEEDLE



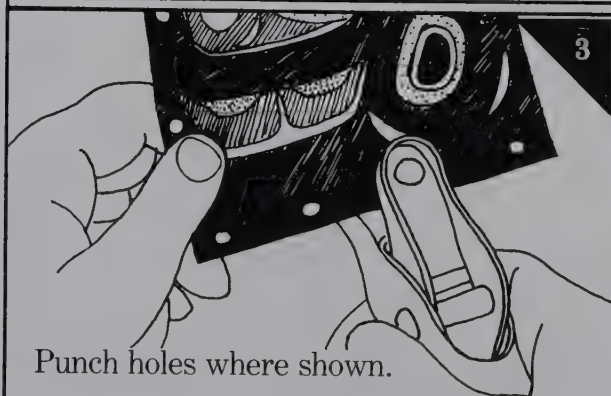
HOLE PUNCHER



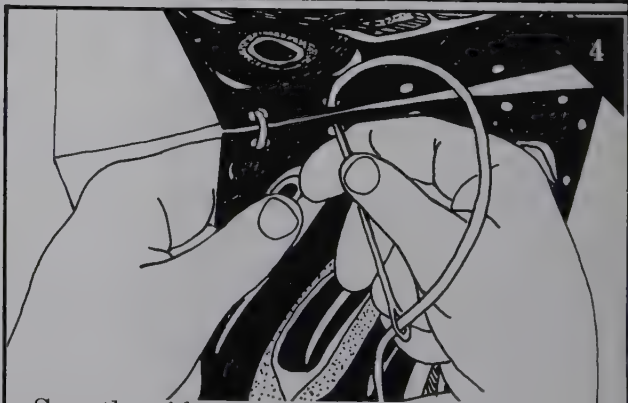
Cut out the side panel from the front and back cover of this book. Be sure it is cut as one piece.



One corner of the box you are going to make has already been bent for you. Now bend two more corners.



Punch holes where shown.
Punch holes on the bottom piece. Make sure the holes match with the side panels.



Sew the sides together and then the bottom.

The Bentwood Box

ADULT TEACHING GUIDES

Introduction to Adult Material

If you are a teacher, scout leader or a parent looking for group activities, these bordered pages were written just for you. There is no mention of transparencies or xeroxes, however, all the kids pages can be duplicated in this manner.

Although people from the northern and southern part of the Northwest coast all made boxes, this book will examine only the box making and art of the northern people of the coast; the Tlingit, Haida, Tsimshian and Bella Bella.

For more information, the following reference materials will be very helpful.

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1897, *"The Decorative Art of the Indians of the North Pacific Coast."* Bulletin of the American Museum of Natural History, New York, Vol. 9.

Boas, Franz and George Hunt

1903-05, *"Kwakiutl Texts"*, Memoirs of The American Museum of Natural History, Vol. 5, Parts 1-3, N.Y. (Reprinted AMS Press, New York)
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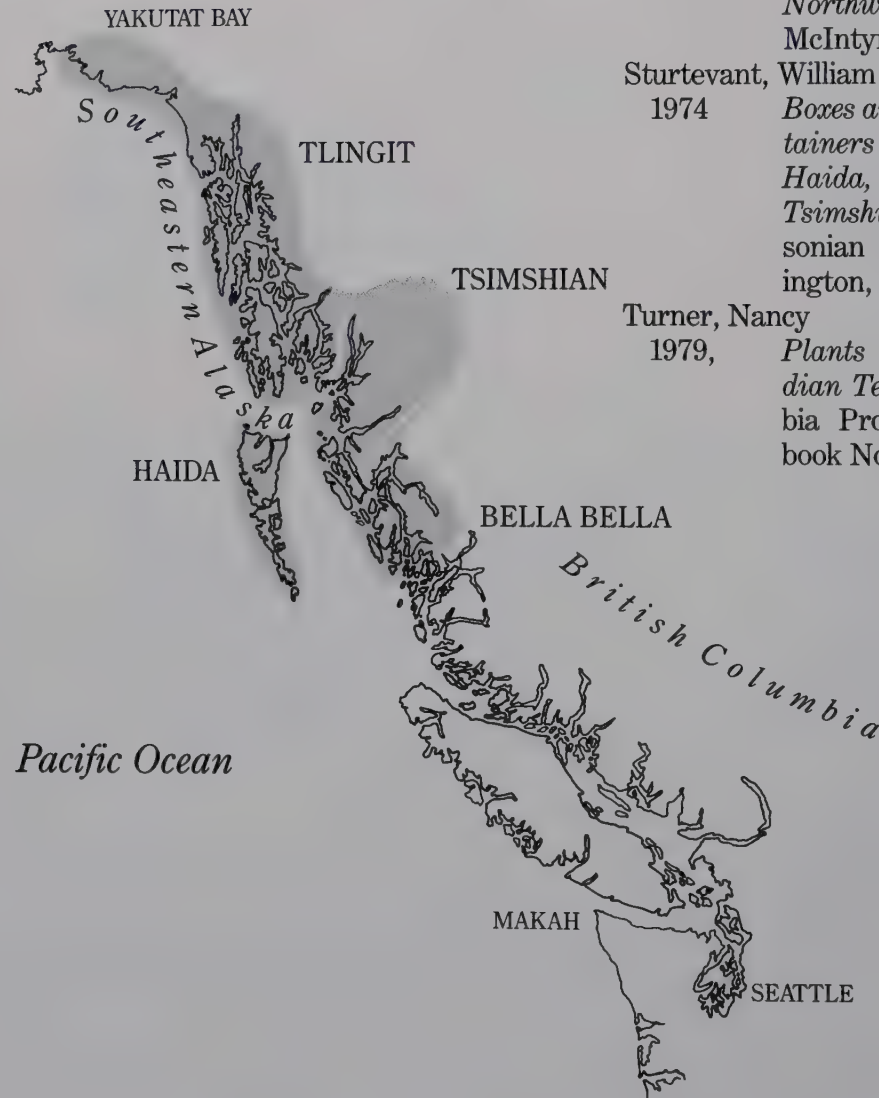
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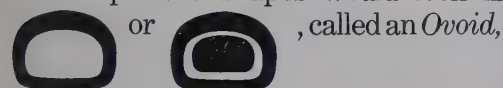
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Art Puzzle

Northwest Coast Indian art is a very old form dating back archeologically to at least 1,000 years ago. It is a very precise art form, comprised of specific elements that when combined, create a whole design.

If you were to closely examine the surface of a bentwood box, you would see that the design is not painted in a continual flowing motion. You would find areas that were painted as contained shapes. The largest and most frequent of the painted shapes would look like this



When an artist paints the surface of a box, he or she often uses templates which are patterns of these shapes. First the design is laid out on the surface by using the templates or parts of the templates as a general guide. Then the paint is applied by painting each shape as a separate piece. The end result, however, is the appearance of a flowing formline.

Group Activities

As the group plays with the puzzle pieces, the different shapes will begin to emerge as two basic patterns. Allow for a lot of free exploration during this time, and also when everyone designs their own animal. This imaginative and creative exploration will develop a greater awareness for the use of Ovoids and U forms.

Activity I.

1. Pass out page 8.
2. Have everyone color and cut the shapes.
3. Now allow time for playing the puzzle.
4. Pass out page 9.
5. Identify the body parts of Raven.
6. Follow instruction given there.

Activity II.

1. Pass out a copy of the puzzle on page 17 to each person.



2. Have everyone point to the eye of the Whale.
3. Now ask everyone to feel the bony structure around their eyes. Have everyone find this part of the Whale. (Large Ovoid around eye/inner Ovoid.)
4. Ask the group to continue to point out the parts of the body; nose, mouth, blow hole,

dorsal fin, body and finally the flipper.

5. Now that everyone has identified the parts of the body, pass out scissors to cut out the parts.
6. Have everyone cut out the puzzle along the *heavy* black lines, discarding the shaded areas. (For younger children, have them cut out the head *only*. Later they can tackle the rest of the body.)



7. Have everyone put their Whale together and color the pieces with a black or red crayon.

Activity III.

1. Pair up everyone, each person bringing with them the puzzle parts.
2. Have each pair make one pile with all their combined puzzle parts.
3. Have one person in each pair choose one puzzle piece.
4. As a team, have the pair select all the puzzle parts that look similar to the piece first selected.
5. Repeat this activity for a second shape.
6. Have everyone discuss the patterns of similarity for each of the piles they make.
7. Introduce the words *Ovoid* and *U* form.
8. Now as a team, have the pair make an animal with their combined pieces. (not every piece has to be used).

Formline Maze

Artists of Northwest Coast Indian art design their flat (two-dimensional) art so that the main body of an animal is generally a black formline. (although it can be red). Formlines are comprised of specific elements like Ovoids and "U" forms, that when combined create a whole design. The formline fluctuates from thick to thin and back to thick again. It is generally connected, flowing continually with soft curves. There are some exceptions to this rule. One exception which *always* exists is that the eye and oval shapes float inside the connected formline.

Group Activities

During these activities encourage your group to come up with many suggestions as to what the similar patterns are for Northwest Coast Indian art. It is best to ask the group if they can find examples to verify the suggested patterns. They may discover many patterns that are true for the art, but not addressed in these activities. That's quite all right.

Activity I.

1. Show the design of Eagle on page 10 to the group.
2. Have one person place a finger anywhere on the black surface. (Avoid the eye and oval shapes).
3. Have a second person place a finger in another place on the black area, again avoiding the eye and oval shapes.



4. Now have the first person move their finger along the black formline toward the second person's finger.
5. Repeat this maze game several times with different pairs, asking the group to find similarities in the way the finger travels along the black surface.
6. Use the second design of Wolf on page 19 and continue to play.
7. Ask the group what other similarities they have found. (continual flow, fluctuation of width, curviness, etc.)
8. Ask the group what shape does not follow these patterns just stated.
9. If they do not mention the eye and oval shapes, point out these exceptions.
10. Ask the group to count how many times this oval shape appears.



11. Answer questions on page 19.

Activity II.

1. Give everyone a piece of butcher paper and one black color crayon.
2. Have everyone make an animal using the patterns that have been established.
3. After everyone has finished, show the cover of this book.
4. Trace the black and red formlines on this chest. Show that the back of the chest is similar to the front, but they are not the same. Now compare the sides of the box. What new patterns can be found?
5. Introduce the word *formline* as the given name for the patterns (flowing as well as eye and oval shape) which they have been exploring.

Making Templates

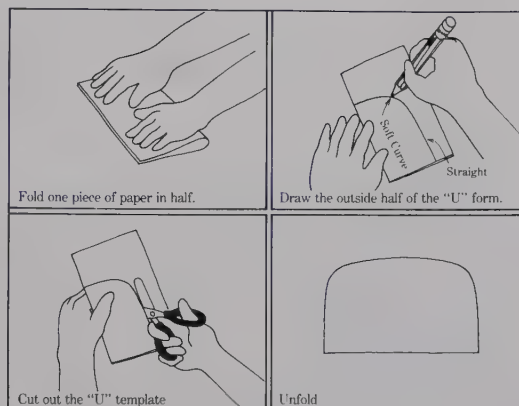
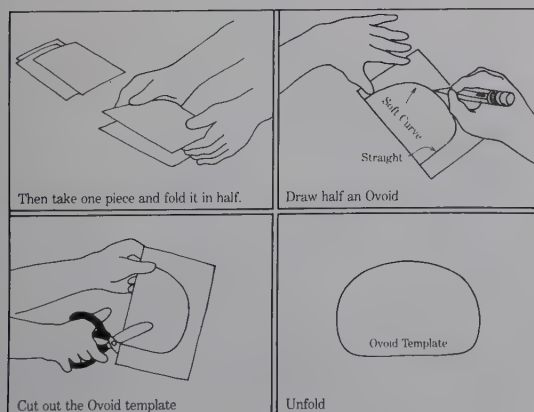
Northwest Coast Indian artists use templates to help them paint their two dimensional designs. These templates are of two types, ovoids and U's. Ovoids are generally oval in shape with one side being a duplication of the other (bilateral symmetry). They are rounded at the tops and nearly straight or concave on the bottom. If an inner ovoid floats inside an outer ovoid, the top of the outer ovoid is thicker than the bottom or the sides.

U's look like the capital letter U with bilateral symmetry generally only in the body. The legs are tapered to points and each leg can vary in length.

Group Activities

Activity I.

1. Pass out pencils, scissors, construction paper and pages 11 and 12.



2. Have everyone cut the paper into $\frac{1}{2}$ and then $\frac{1}{2}$ again, so that there are 4 pieces.
3. To make an ovoid, have each person fold one piece of paper down the middle so that the two halves are equal. Demonstrate to the group.
4. With a pencil each person should draw $\frac{1}{2}$ of the ovoid.
5. Have everyone cut out the ovoid and unfold the ovoid.
6. Each person should make sure that the ovoid is not pointed at the top or bottom. If the ovoid is pointed, instruct the person to refold the ovoid and trim off the point.
7. Everyone can make one more ovoid by folding a second piece of paper. Fold it so that the paper is a different shape than the first ovoid.
8. Repeat the above steps.

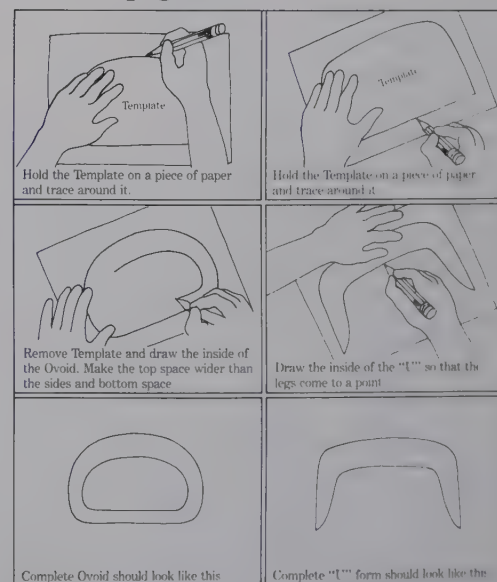
Activity II.

To make U templates, follow the same steps as in Activity I; however, have everyone draw and cut the sides of the U straight down. Make sure they do *not* cut out the center of the U. They should make only the outer shell.

When the U template is used, it is a *reference* for the base and sides of the legs. The points to the legs and the legs themselves are drawn in freehand so that the U form looks like this:

Activity III.

1. Pass out page 13.

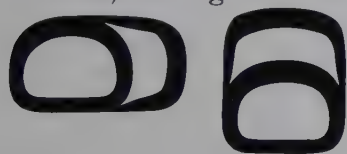


2. Have everyone trace around their templates.
3. Ask everyone to design an animal's head using their templates.

Game: Connect It!

Artists of Northwest Coast Indian art design their art pieces using ovoids and U's, connecting them in different ways. Each method of connecting helps to give a smooth outer edge to the whole formline design.

- A. When a U is placed on top or to the side of an ovoid, both legs touch the ovoid.

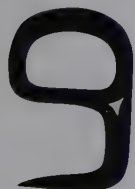


- B. When an ovoid overlaps the body of a U, two "T" shapes are used.



- C. When one leg of the U is placed under the base of an ovoid:

1. a "T" shape is needed



2. or, a crescent shape is used to follow the base curve of the ovoid.



- D. When two Ovoids are used:

1. they are overlapped and a "T" shape is placed at the bottom



2. they are placed side by side as for the eye sockets of a face and a "T" shape is used at the top. Sometimes one or two circles are placed at the bottom for nostrils.



- E. U's can be placed on top of one another.



- F. U's can be placed next to one another.



Group Activities

Activity I.

1. Divide everyone into groups of 4.
2. Pass out rules page 14 and discuss them.
3. Pass out page 15 to cut out pieces.
4. Begin game.

Connect the bottom of the Ovoid to the side of the "U" - leg. Use a Crescent shape	Connect the points of the "U" form to the side of the Ovoid	Connect the bottom of the Ovoid to the side of the "U" - leg. Use a Crescent shape	Connect the points of the "U" form to the side of the Ovoid	
Connect the bottom of the Ovoid to the side of the "U" - leg. Use a "T" shape	Connect the side of the Ovoid to the side of another Ovoid. Use an "L" shape on the bottom.	Connect the bottom of the Ovoid to the side of the "U" - leg. Use a "T" shape	Connect the side of another Ovoid. Use an "L" shape on the bottom.	
Connect and overlap the bottom of the Ovoid to the back of the "U" form. Use a "T" shape	Connect the points of one "U" form to the back of another "U" form.	Connect and overlap the bottom of the Ovoid to the back of the "U" form. Use a "T" shape	Connect the points of one "U" form to the back of another "U" form.	
Connect the points of the "U" form to the top of the Ovoid	Connect the leg of one "U" form to the leg of another "U" form	Connect the points of the "U" form to the leg of the Ovoid	Connect the leg of one "U" form to the leg of another "U" form	

Activity II.

Additional materials needed:

10 pins for each pair

butcher paper for each pair

1. Divide the group into pairs. Have each person bring with them the puzzle pieces and templates.
2. Pass out one piece of butcher paper to each pair, along with the pins and pencils.
3. Have each pair arrange their combined puzzle pieces and templates to make an animal.
4. Each pair should use the pins to attach their puzzle pieces to the butcher paper. With the pencils they should trace around their templates and draw their "T" shapes and crescents.
5. Have the pair share their animal with the group.

Salmon Egg Painting

Invention takes a lot of experimentation with different materials and different proportions. Northwest Coast Indians invented many different ways to make paint. One way was by using salmon eggs as the binding agent.

In early times the eggs were dried and when ready to be used, they were chewed. The saliva solution was then mixed with pigment in a mortar. This type of paint was used up into the early 1900's. By 1920 most artists were using commercial paints which were much easier to obtain.

Pigments came from a variety of sources. Some reds came from clays stained with iron oxide, inner bark of the hemlock tree or Indian paint fungus (*Echinodontium tinctorium*). Greens and blues came from copper ores or clays stained with the oxide. Black came from charcoals, magnetite or graphite. White pigments came from ground shells, bone, or white clay.



You can obtain salmon eggs at a fisherman's wharf from the fishermen or from a hatchery. Frozen eggs will work well for making paint but not as well as fresh salmon eggs. Do not use processed salmon egg bait.

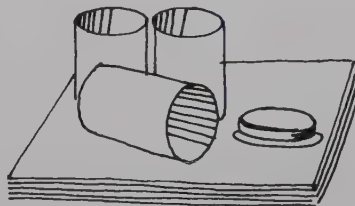
To produce a black color use charcoal or graphite. The charcoal used must be pure black and ground to a fine powder. Do not use charcoal briquets.

Group Activities

Additional materials needed:

Small containers, like film canisters with lids.

Index cards.

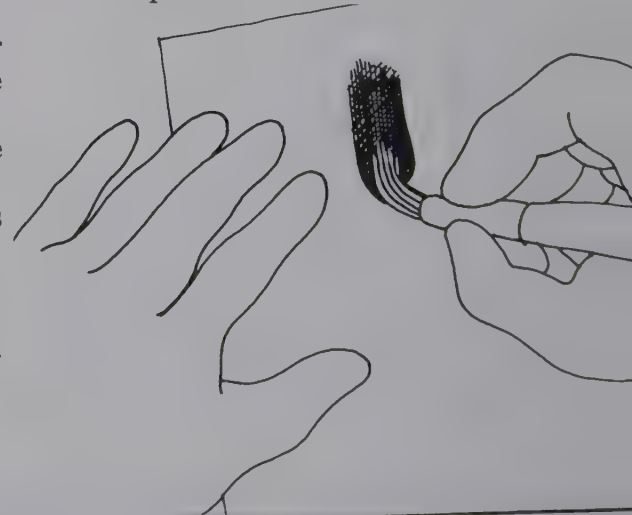


Activity I.

1. Have one person grind up the charcoal.
2. You should put a few salmon eggs in each person's film canister lid. Pass these out along with a pin for each person.
3. Allow time for each person to explore the eggs. The eggs should be pricked to allow oils to come out easily.
4. Demonstrate to the group that the egg oil alone has little or no color by painting some on a piece of paper.
5. Place some of the eggs and oil together with the charcoal. Have one person mix the materials together.
6. If thinner consistency is desired, use some water.
7. Pour paint into film canisters and pass paint out to each person.
8. Pass out paint brushes and butcher paper.
9. Each person can paint a design.
10. Have everyone wash the brushes and containers immediately after use.

Activity II.

1. Have each person bring in some type of material that will make a color; bark, clay, berries, other vegetable matter.
2. Pass out index cards and have each person write down on the card what they are going to use to make a color-pigment. Leave space for the paint.!
3. Grind eggs and pass out egg's oil to each person in film canisters with lids. (make sure you prick the eggs).
4. Pass out paint brushes.
5. Have each person grind up the pigment and oil using the handle end of the brushes.
6. Everyone should paint a spot of color on the index card.
7. Make sure everyone puts lids on the paints so they do not dry out.
8. Display cards so that everyone can see the results.
9. Each person can paint a design and share the paints with others.



Traditional Colors

Northwest Coast Indian artists use different colors to indicate the inside of the animal's body. Basically, the same rules apply as with black or primary formlines.

- A. The inside or secondary formline for a U is almost always another type of U. These are always painted in red if the primary formline is black. Note: They do not touch the outer or primary U except, at the point of the legs.



- B. The inside design for an ovoid is another ovoid, (an inner ovoid), or an eye or a small face.

1. If an eye is used, it follows the same rules as an inner ovoid. It is the same color as the outside ovoid, because it is considered as part of the primary formline design. It has bilateral symmetry, and it does not touch the outer ovoid. A thin black line goes around the inner ovoid and eye.



2. If a small face is painted inside the outer Ovoid it is treated in the same way as an inner ovoid or eye, too. This small face is usually a design and not the real face of the animal. This design, as well as an inner ovoid, generally represents joints. This gives the art the feeling that there

are many eyes and faces.



- C. An S design is commonly used as a part of the body, like the ribs. These body parts are treated as a secondary formline, are painted red, and always touch the primary formlines somewhere. (see shaded area below)



Group Activities

Allow for lots of experimentation. This will increase the understanding of the composition of the art form.

Activity I.

1. Pass out page 21.
2. Have persons color the designs.
3. As a group, discuss the ovoids. Do they mimic the outside shape? Do they attach to the outside shape? Where? What happens with color?
4. Have the group feel their own shoulder joints. Have them move their arms to feel the circular motion.
5. Tell them that joints can be represented by inner ovoids, or faces.
6. Using the cover of the book, look for ways the ovoids and inner ovoids have been designed.
7. Pass out butcher paper and black and red crayons to everyone.
8. Everyone should draw a large ovoid on the paper and create a design for the inside of this large ovoid.

Activity II.

Repeat Activity I using the U form and secondary U form instead of the ovoid and inner ovoid. Inner or secondary formline U's are always red if primary or outer formlines are black.

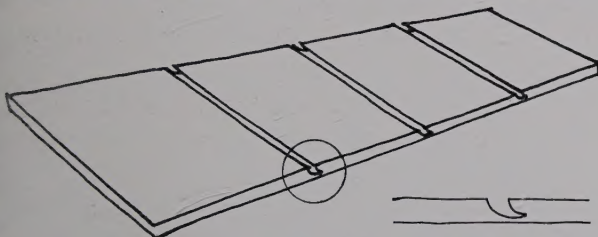
Activity III.

1. Pass out page 22 with crayons.
2. Color the Baby Eagle.
3. Show the cover of the book and have the student answer the questions.

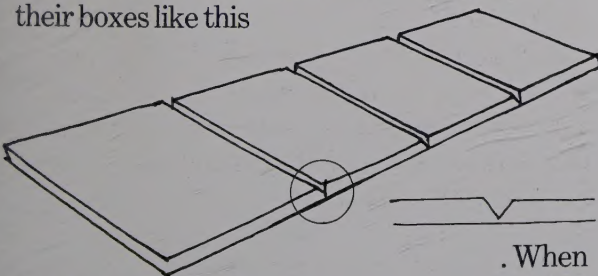
Making Model Boxes

Artists of Northwest Coast Indian art continue to make boxes as art pieces as well as functional pieces. Today, many artists have varied the method of bending boxes. Some use steam from boiling water heated by an electric stove. Some still use the old method of steaming a cedar plank in a pit heated by hot stones.

There are variations also in the way artists cut the planks. Tlingit, Haida, Tsimshian and Bella Bella artists cut the plank like this



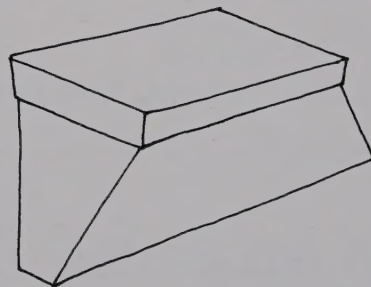
so that when the corners are bent the outside will be curved and smooth. The boxes look as though they have been carved out of a chunk of wood not bent from a plank. The Kwakiutl, Westcoast and Salish people cut their boxes like this



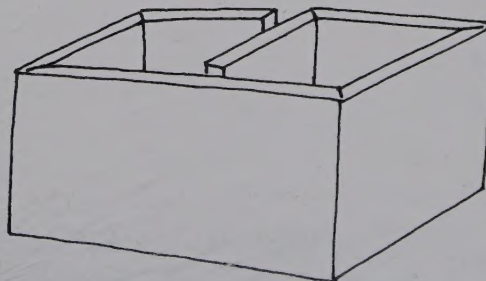
. When the box is bent the corners are squared and cracked. These boxes do not look as though they have been bent either, but look as though separate planks have been put together.

Boxes are also made in different shapes with different types of lids depending on the purpose of the box. Some are tiny and square, others large and tall, and still others are large and long. Boxes, like the one on the cover were first bent, then painted with red and black and then carved. This style was often used for storing masks and ceremonial clothing.

Boxes that were used in canoes were bent so that the bases would fit snugly in the ends of the canoe. They looked something like this.



At Ozette, an archeological site on the coast of Washington and the ancestral home of the Makah people, boxes were found which were made as two boxes in one. These boxes were bent in five places instead of four.

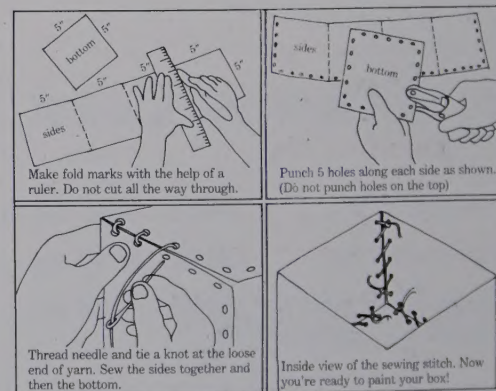


Group Activity

1. Use page 23 or page 24.
2. For page 23, each person should measure, draw and cut a strip of tag board that is 5 inches by 25 inches.
3. Have each person cut a 5 inch square from the strip of tag board, leaving a 20 inch strip.

This 5 inch square is the bottom of the box. The strip remaining will become the sides.

4. Now each person can scribe the long strip into 4 squares using a dinner knife. Do *not* cut all the way through.
5. Have every one punch holes along all seams as follows:



6. The box should be bent with the scribe marks inside the box.
7. Using yarn and a plastic yarn needle, each person can now sew the sides together and the bottom onto the sides.

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